IN THE CLAIMS:

1. (Currently amended) A method for detecting protein-protein interactions in a host cell cytoplasm, the method comprising:

a. introducing a first recombinant expression construct encoding a first protein or protein-binding fragment thereof fused with the amino- or carboxyl- terminus of a transcriptional inhibitor;

b. introducing a second recombinant expression construct encoding a second protein or protein-binding fragment thereof fused to a cytoplasm localization sequence,

wherein the first or second protein or both is a protein encoded by a cDNA molecule or a member of a cDNA library, wherein said library comprises a plurality of fusion proteins in which the transcription inhibitor protein is fused to each of a plurality of members of said cDNA library in each species of fusion protein comprising said plurality of fusion proteins,

wherein upon interaction of the first and second proteins in the cell cytoplasm, said transcriptional inhibitor is localized to the cytoplasm, wherein transcription of a gene operably linked to a promoter that is sensitive to or regulated by said transcriptional inhibitor is increased; and

c. detecting said increased transcription of said gene,

wherein said protein-protein interaction is detected thereby.

2. (Original) The method of claim 1, wherein the cytoplasm localization sequence is a membrane targeting sequence.

3. (Original) The method of claim 2, wherein the membrane targeting sequences are a myristoylation sequence, mitochondrial outer membrane targeting sequence, or a membrane anchoring sequence.

4. (Original) The method of Claim 3 wherein the myristoylation sequence is MGCTVSTQTIGDESDP (SEQ ID NO:1).

5. (Original) The method of Claim 3 wherein the mitochondrial outer membrane targeting sequence is the N-terminal sequence of Tom70/Mas70 protein, MKSFITRNKTAILATVAATGTAIGAYYYY (SEQ ID NO:3).

6. (Original) The method of claim 1, wherein the second protein is a protein encoded by a cDNA or a member of a cDNA library, wherein said library comprises a plurality of fusion proteins in which the transcription inhibitor protein is fused to each of a plurality of members of said cDNA library in each species of fusion protein comprising said plurality.

7. (Original) The method of claim 1, wherein the second protein is a transcriptional activator protein or one of a multiplicity of proteins that participate in protein-protein interactions to bring about transcriptional activation.

8. (Original) The method of claim 1, wherein the first protein is a protein encoded by a cDNA or a member of a cDNA library, wherein said library comprises a plurality of fusion proteins in which the transcription inhibitor protein is fused to each of a plurality of members of said cDNA library in each species of fusion protein comprising said plurality.

9. (Currently amended) The method of claim 8 ~~claim 1~~, wherein the second protein is a transcriptional activator protein or one of a multiplicity of proteins that participate in protein-protein interactions to bring about transcriptional activation.

10. (Original) The method of claim 1, wherein said first or second proteins are detectable or produce detectable metabolites.

11. (Original) The method of claim 1, wherein the gene expressed from the promoter that is sensitive to or regulated by the transcriptional inhibitor is one of a multiplicity of genes that encode detectable proteins.

12. (Currently amended) The method of claim 1, wherein the gene operably linked to a promoter that is sensitive to or regulated by said transcriptional inhibitor is a gene expressed from a ~~GAL4 protein activatable~~ promoter that can be activated by GAL4 protein.

13. (Currently amended) The method of claim 12, wherein the gene expressed from the ~~GAL4 protein activatable~~ promoter that can be activated by GAL4 protein is one of a multiplicity of genes that encode detectable proteins.

14. (Currently amended) The method of claim 12, wherein the ~~GAL4 protein activatable~~ promoter that can be activated by GAL4 protein is one of a multiplicity of promoters that contain a UAS_{GAL} site.

15. (Original) The method of claim 12, wherein the gene operably linked to a promoter that is sensitive to or regulated by said transcriptional inhibitor is one of a multiplicity of genes encoding a detectable product.

16. (Original) The method of claim 12, wherein the transcription inhibitor is Gal80p.

17. (Original) The method of claim 1, wherein the gene operably linked to a promoter that is sensitive to or regulated by said transcriptional inhibitor is a selectable gene, wherein increased expression of said gene confers a growth advantage on the cell or distinguishes the cell in some detectable manner.

18. (Original) The method of claim 16, further comprising:

d. subjecting the host cell to selective growth conditions; and

e. detecting increased growth or survival of said cells under selective growth conditions;

wherein said protein-protein interaction is detected thereby.

19. (Currently amended) A method for isolating said first or second fusion proteins according to claim 1, the method comprising:

a. detecting increased expression of the gene operably linked to a promoter that is sensitive to or regulated by said transcriptional inhibitor; and

b. isolating said first or second fusion proteins.

20. (Cancelled)

21. (Currently amended) A method for detecting protein-protein interactions in the cytoplasm of a cell of a multicellular organism, the method comprising:

a. introducing a first recombinant expression construct encoding a first protein or protein-binding fragment thereof fused with the amino- or carboxyl- terminus of Gal80p;

b. introducing a second recombinant expression construct encoding a second protein or protein-binding fragment thereof fused to a cytoplasm localization sequence, wherein upon interaction of the first and second proteins in the cell cytoplasm, said Gal80p is localized to the cytoplasm, wherein transcription of a gene operably linked to a promoter that is sensitive to or regulated by said Gal80p is increased; and

c. detecting said increased transcription of said gene,

wherein said protein-protein interaction is detected thereby.

Claims 22-74 (Cancelled).